

# Searching Mentor 3D Library from Xpedition Layout

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# Query for 3D Parts/Models

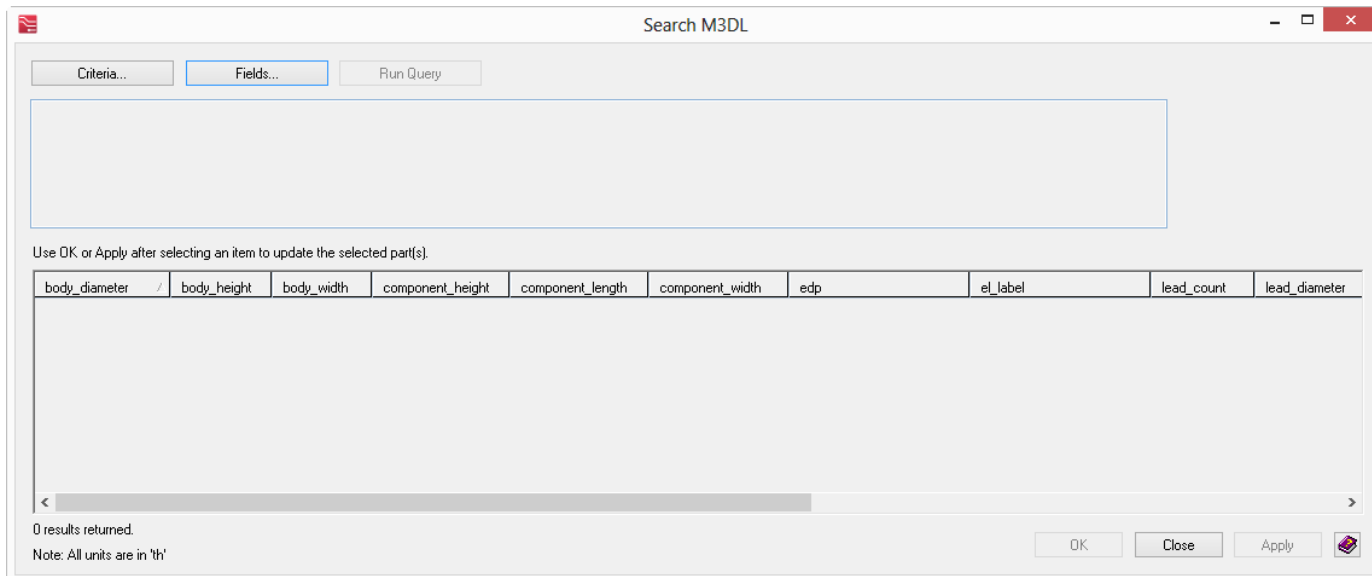
- *Xpedition 3D Designer* allows the user to graphically select a component and then to query the *xLM 3D Library* for a Part/Model to assign
  - Refer to the **M3DL\_ParametricDatabase\_Installation\_Guide\_V2.2.docx** documentation on details for installing the *xLM 3D Library* environment
  - Refer to the **M3DL\_SetupExpedition3D\_DesignerFlow.pdf** documentation for details in defining *xLM 3D Library* attribute definitions

# xLM 3D Library

- Within *Xpedition 3D Layout* the designer can search the *xLM 3D Library* using two methods when a component is selected:
  - **3D > Models > Search M3DL** command
  - Within the *3D Cell Editor* while using the *Align 3D Models* GUI by selecting the **Search M3DL** button
- Each of these methods will launch the *Search M3DL* dialog allowing the designer to define a database query to find a 3D part/model to be used by the selected component. These methodologies are only supported for parts which do not already have a 3D model assigned from xDM and these commands are available based on having a component selected in 3D.

# Search M3DL Dialog

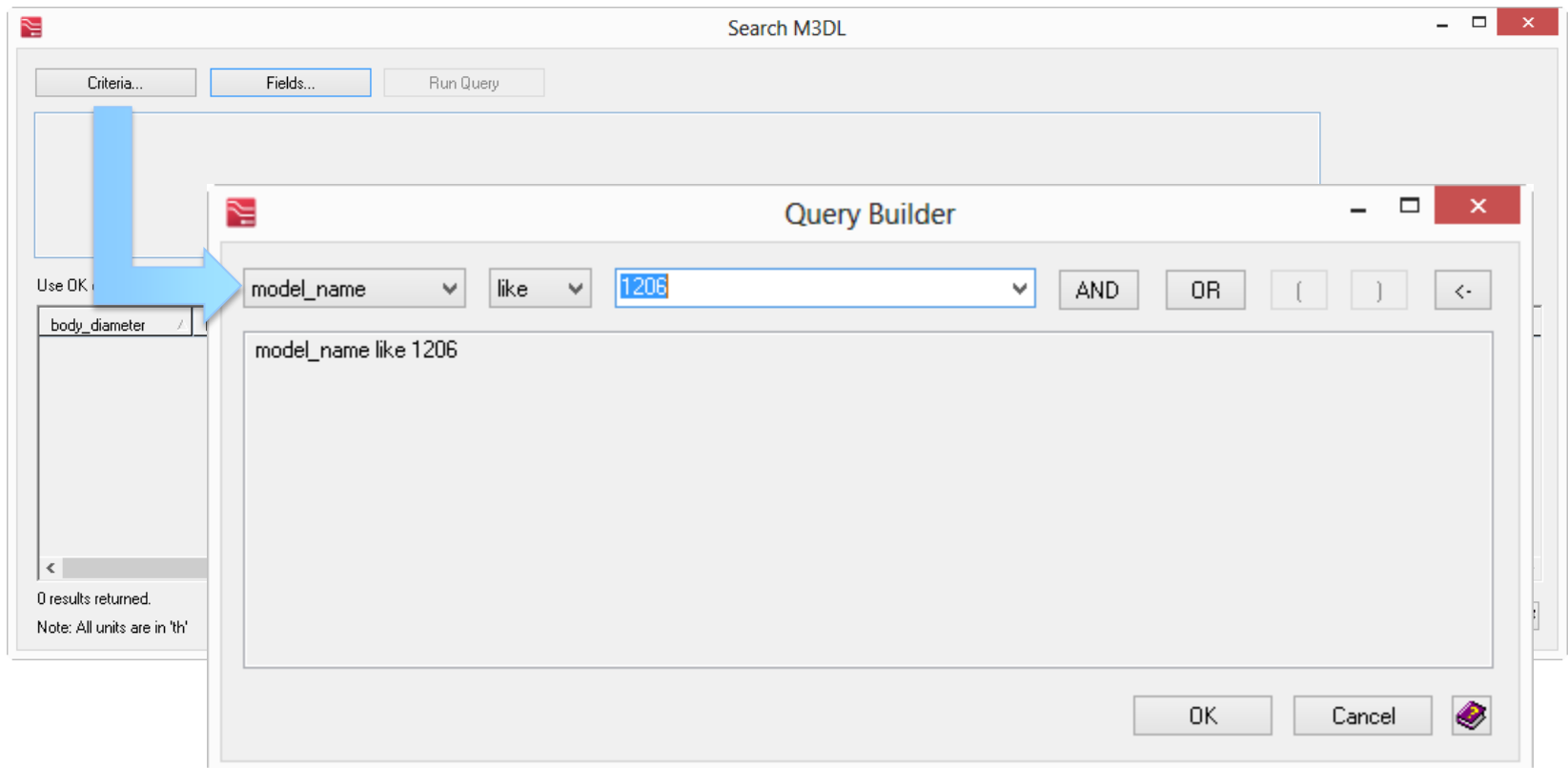
- This dialog allows the designer to define a database query for parts based on the 3D model attributes
  - **Criteria** displays the *Query Builder* dialog
  - **Fields** allows the designer to customize which 3D attributes will be disabled
  - **Run Query** sends the user's defined query within the *Query Builder* dialog to the database and then displays the results



# Search M3DL Dialog (cont.)

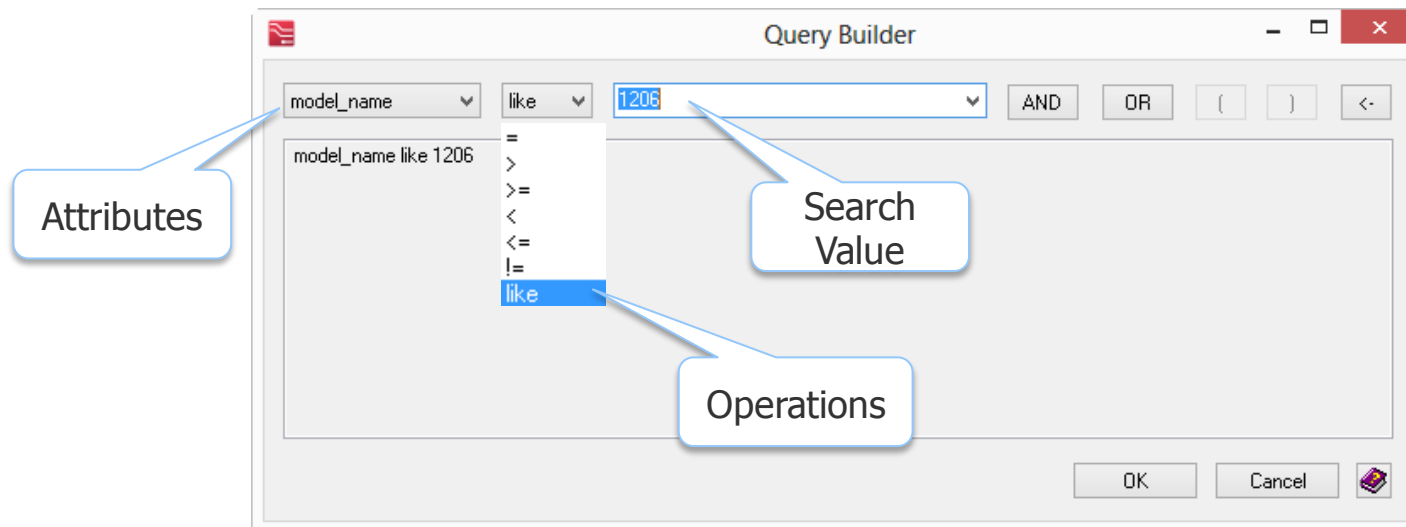
## ■ **Criteria** option on *Search M3DL* dialog

- When the **Criteria** button is selected the *Query Builder* dialog appears allowing the designer to input a database query



# Query Builder Dialog

- The *Query Builder* dialog provides pre-defined *Attribute* and *Operation* query drop-downs, along with the user's *Search Value*, locates matching model criteria in the *xLM 3D Library*
  - **Attribute** defines the model property to be searched
  - **Operation** defines matching operation
  - **Search Value** defines user inputted search criteria




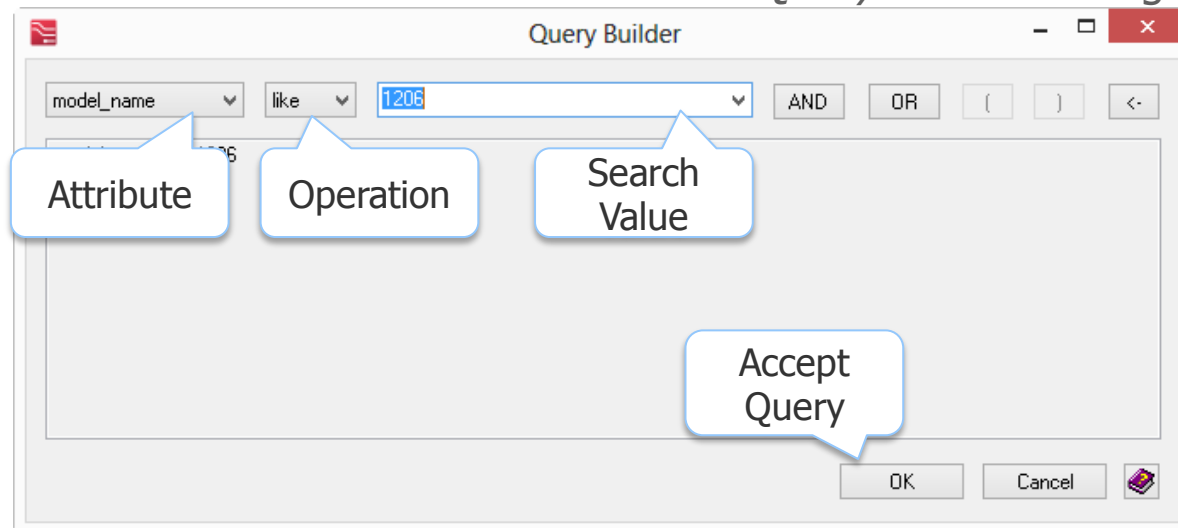
Available  
Attribute  
List

body\_diameter  
body\_height  
body\_width  
color  
component\_height  
component\_length  
component\_width  
edp  
el\_label  
etd  
lead\_count  
lead\_diameter  
lead\_groove\_count  
lead\_height  
lead\_length  
lead\_length2  
lead\_span  
lead\_width  
lead\_width2  
mass  
model\_name  
package\_name  
package\_path  
pitch  
series\_root  
stack\_height  
stacker\_height  
upper\_lead\_length  
vendor

# Query Builder Steps

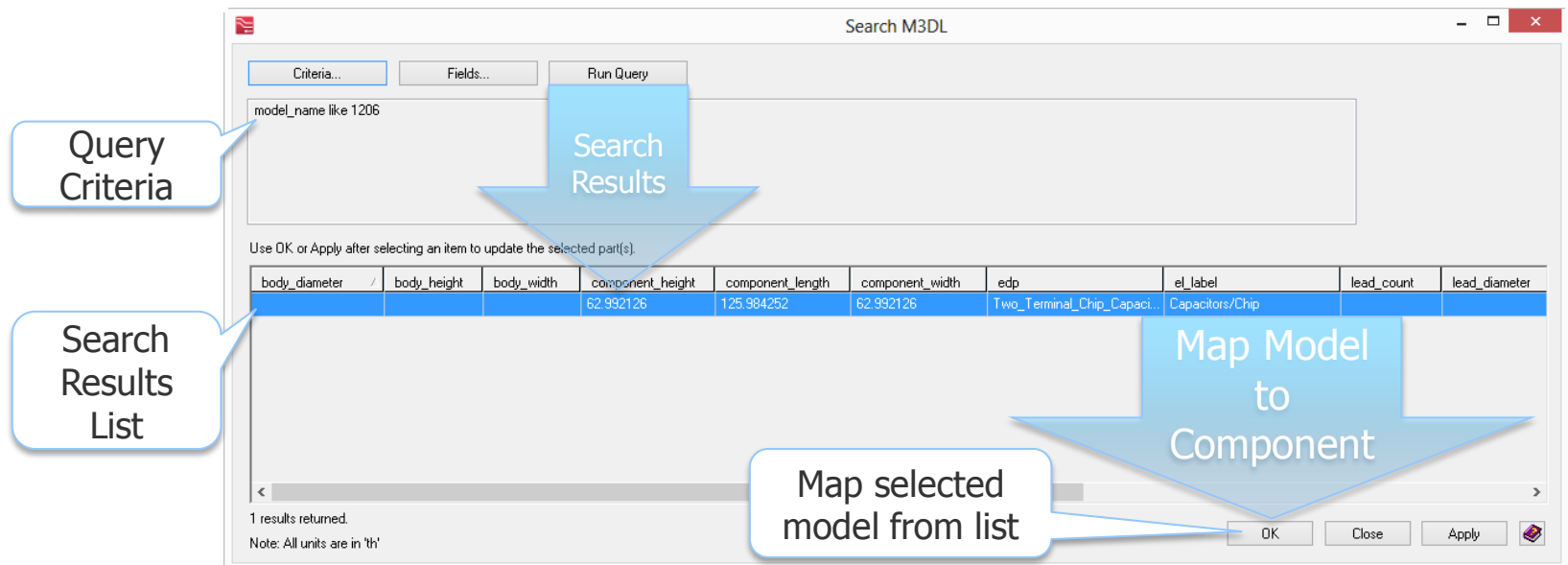
## ■ Once the *Query Builder* dialog appears:

- 1) Select the *Attribute* drop-down to choose the property type to search.
- 2) Select the *Operation* from the drop-down to use during the search.
- 3) Enter a string or use the drop-down to select a *Search Value*.
- 4) Users may want to add conditions like "AND" "OR" including the use of brackets "[ ]". The  button allows previously added query strings to be removed.
- 5) Select the **OK** button to save and exit the *Query Builder* dialog.



# Running M3DL Query Search

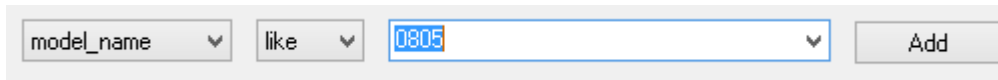
- The *Search M3DL* dialog reappears displaying the query within the *Query Criteria* area. Select the **Run Query** button to initiate the search.
- Once the *Run Query* returns the search results, select the *Row* of the desired model and click the **OK** or **Apply** button to map the selected model to the selected component.






# Common Query Examples

- Search for a model based on a common footprint names 1206, 0805, 0402, etc.



A screenshot of a search interface. It features a dropdown menu with 'model\_name' selected, followed by a dropdown with 'like' selected, and a text input field containing '0805'. To the right of the input field is an 'Add' button.

- Search for a model based on Manufacturer Number



A screenshot of a search interface. It features a dropdown menu with 'model\_name' selected, followed by a dropdown with '=' selected, and a text input field containing 'MCR18ERTF5K10'. To the right of the input field is an 'Add' button.

- Vendor and Lead Count

vendor\_lower like samtec and lead\_count = 10

- Complex query search:

vendor\_lower like \*micron\* and series\_root\_lower like \*mobile\* and lead\_count = 54 and package\_name\_lower like \*bga\*



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